



**GE Power Systems  
Americas**

**Zigmund F. Biernacki**  
Generation Account Manager

General Electric Company  
Winstone Plaza, Suite 900  
7450 W. Courtney Campbell Causeway, Tampa, FL 33607  
Mail Address: P.O. Box 10577, Tampa, FL 33677  
Phone (813) 266-4854 Fax (813) 266-4888  
E-Mail: [Biernacki@uchfms3.sch.ge.com](mailto:Biernacki@uchfms3.sch.ge.com)

November 14, 1997

**Mr. Bruce Baldwin**  
Florida Power Corporation  
3201 34th Street South  
St. Petersburg, FL 33711

**Subject: Florida Power Corporation  
Tiger Bay NOx Reduction Proposal**

Dear Bruce,

As a follow-up to my discussion with your Rob Anderson, GE is pleased that Florida Power Corporation (FPC) has accepted GE's proposal to modify the Tiger Bay MS7001FA DLN 2.0 Combustion System to a DLN 2.6 Combustion System prior to 2000. This modification, as detailed in our Proposal No. : 980064Q, will obtain a NOx emission of 15 ppmvd @ 15% O2. The DLN 2.6 combustion system is the latest combustion design to meet emission requirements below the 25 ppm NOx level.

Again, thank you for your continued interest in GE Power Generation products.

Sincerely,

Zigmund F. Biernacki

cc: F. Gates / 37-4 Schdy  
J. Wells/G. Steensbury  
G. L. Hammond  
W. Golden - FPC



# Department of Environmental Protection

Lawton Chiles  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Virginia B. Wetherell  
Secretary

November 12, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. Jeffrey Pardue, Director  
Environmental Services Department  
Florida Power Corporation  
3201 34th Street South  
St. Petersburg, FL 33733

Re: DEP File No. 1050223-007-AC  
Tiger Bay Power Plant - 258 MW Cogen Unit

Dear Mr. Pardue:

The Department has reviewed your October 30, 1997 letter requesting a modification of construction permit No. AC-53-214903 (PSD-FL-190) to extend the compliance date for achievement of the 15 parts per million nitrogen oxides (15 ppm NO<sub>x</sub>) emission limit. Prior to issuing an Intent on this request, we require the manufacturer's written confirmation that the Dry Low-NO<sub>x</sub> (DLN 2.6) technology will meet the limit of 15 ppm and will, in-fact, be installed by December 31, 1999. Alternatively, we will accept a sealed professional engineer's evaluation. Attached is an example of reasonable assurance provided by GE on a similar project.

We agree that the technology is preferable for environmental and operational reasons to Selective Catalytic Reduction (SCR) when it achieves approximately the same level of NO<sub>x</sub>. For those reasons we determined higher Best Available Control Technology emissions on projects utilizing various "dry" technologies. As discussed with Mr. Kennedy of your staff, should FPC choose to install SCR, the Department will revise the emission limit to 10 ppm.

Sincerely,

A. A. Linero, P.E. Administrator  
New Source Review Section

AAL/aal

enclosure

cc: Brian Beals, EPA  
John Bunyak, NPS  
Bill Thomas, SWD  
Buck Owen, DEP  
Jennifer Tiliman, FPC

"Protect, Conserve and Manage Florida's Environment and Natural Resources"



GE Power Generation

Global Power Plant Systems Department  
General Electric Company  
One River Road, Schenectady, NY 12345  
518-385-7222

11 October, 1996

Subject: Kissimmee Utility Authority  
Cane Island No. 1  
DLE upgrade

Mr. A. K. Sharma  
Power Supply Department  
Kissimmee Utility Authority  
P.O.Box 423219  
Kissimmee, Florida 34742

RECEIVED

OCT 16 1996

POWER SUPPLY DEPT.

Dear Ben:

GE is aware that Kissimmee Utility Authority (KUA) Cane Island No. 1 Gas Turbine is currently permitted to operate at the Allowable Emission Rate of 25 ppmvd on Gas and 42 ppmvd on Oil. The BACT Determination section of the permit states that "the department has accepted the water injection (LM6000) and the 25 ppmvd (natural gas) /42 ppmvd (oil) at 15%O<sub>2</sub> as BACT for a limited time (up to 1/1/98)". The permit also states that "the manufacturer will attempt to achieve a maximum NO<sub>x</sub> emission level of 15 (gas)/42 (oil) ppmvd by 1/1/98," and that "should this level of control not be achieved..... the permittee must provide the Department with expected compliance dates which will be updated annually."

The BACT Determination further states that "it is the Department's understanding that General Electric is developing programs for....the LM6000, to achieve a NO<sub>x</sub> emission control level of 9 ppm when firing natural gas. The Department has determined that the following BACT will apply....

b) For the simple cycle unit (LM6000), the manufacturer will attempt to achieve a maximum NO<sub>x</sub> emission level of 15(gas)/42(oil) ppmvd by 1/1/98. Should this level of control not be achieved, the permittee must notify the Department of the expected compliance date by 1/1/97."

This letter is to inform you that the GE DLE development program is not currently in a position which would allow us to provide a dry low emission (DLE) retrofit package for the LM6000 at Cane Island to meet the requirements of your air permit by the 1/1/98 date.

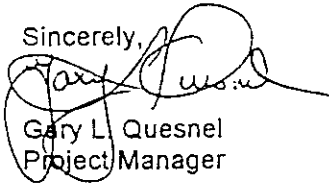
GE has undertaken programs to develop the technology for reducing the emissions of the GE gas turbines to the levels listed in your permit and beyond. These are complex and lengthy programs and the progress estimates provided to KUA at the time of the establishment of your permit were based on what we knew then. GE has embarked on these programs for both the heavy duty frame type machines manufactured by GE Power Generation and the aeroderivative type turbines manufactured by the Marine and Industrial Engine Division(M&I) of GE Aircraft Engines. Although the programs have been able to take advantage of achievements in each other's progress, the programs have developed separately due to differences in the equipment and technologies.

There may be some confusion regarding retrofit availability for GE gas turbines with dry low NOx (DLN) combustors because of the dual development programs that GE is conducting. The GE dry low NOx (DLN) development program for our heavy duty frame units is two to three years ahead of the LM 6000 DLE program. DLN retrofit packages for existing heavy duty frame units with steam or water injection are available for some Frame 3, 6B and 7EA gas turbines. In addition, there may be some new frame 7EAs and 7F/FA machines retrofit with advanced DLN combustors. The nature of any combustion development program is such that a database of experience must be established from units operating in commercial service before the advanced (lower NOx) combustor can be made available. In such cases, regulatory agencies have allowed units to go into commercial operation with higher NOx levels with a goal of lower levels in the future. In such cases (for frame units), retrofits of lower NOx combustor may have been committed. The key point to note, however, is that the heavy duty gas turbine DLN program has been successful in meeting its goals and is at least two to three years ahead of the LM DLE program.

GE remains committed to the DLE and DLN development programs for both aeroderivative and heavy duty type gas turbines. No firm date has yet been established for retrofit availability for existing or new LM6000 units; however, key milestone tests significant to the development process are scheduled to be completed during the first half of 1997. Once these tests have been completed, GE will have a firm plan established and will be able to advise KUA as to when the retrofit package for Cane Island No. 1 will be available.

GE will support KUA as necessary in petitioning the Florida DER to allow the Air Permit for Cane Island to be amended such that the required date for operation at 15 ppmvd(gas) and 42 ppmvd(oil) be changed from 1/1/93 to 1/1/99 initially. The change will then bring the permit in line with the state of advancement in technology development of the DLE program. Please contact me with what actions that KUA would like GE to take in the future in this regard.

Sincerely,



Gary L. Quesnel  
Project Manager

cc: H. Jacobs	B&V
D. Swanson	GE
J. Such	GE

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- 1.  Addressee's Address
- 2.  Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:  
 Mr. W. Jeffrey Pardue  
 Env. Services Dept.  
 FPC  
 3201 34th St. South  
 St. Pete, FL 33733

4a. Article Number  
 P 265 659 487

4b. Service Type  
 Registered  Certified  
 Express Mail  Insured  
 Return Receipt for Merchandise  COD

7. Date of Delivery  
 11/17/97

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature: (Addressee or Agent)  
*[Handwritten Signature]*

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.

P 265 659 487

US Postal Service  
**Receipt for Certified Mail**  
 No Insurance Coverage Provided.  
 Do not use for International Mail (See reverse)

Sent to Jeffrey Pardue	
Street & Number FPC	
Post Office, State, & ZIP Code St. Pete, FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date 11-12-97 1050223-007-AC	

PS Form 3800, April 1995



November 4, 1997

Mr. A. A. Linero, P.E.  
Florida Department of  
Environmental Protection  
New Source Review Section  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Re: Permit Amendment No. 1050223-006-AC  
Permit Nos. PSD-FL-190 / AC53-214903  
Tiger Bay Facility  
Changes to Testing Conditions

Dear Mr. Linero:

Enclosed is the newspaper affidavit of publication for the permit amendment referenced above. The Public Notice of Intent was published in the Lakeland Ledger in Polk County on October 24, 1997.

If you have any questions, please feel free to give me a call at (813) 866-5022 or Mr. J. Michael Kennedy at (813)866-4344.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer L. Tillman".

Jennifer L. Tillman, P.E.

Enclosure

cc: J. Heron, BAR  
SWD  
Polk Co.  
M. Costello, BAR

**RECEIVED**

NOV 10 1997

BUREAU OF  
AIR REGULATION

# AFFIDAVIT OF PUBLICATION

## THE LEDGER

Lakeland, Polk County, Florida

Case No .....

STATE OF FLORIDA)  
COUNTY OF POLK )

Before the undersigned authority personally appeared Nelson Kirkland, who on oath says that he is Classified Advertising Manager of The Ledger, a daily newspaper published at Lakeland in Polk County, Florida; that the attached copy of advertisement, being a

### Public Notice Of Intent

in the matter of .....

Draft Permit Amendment No.1050223-006-AC

in the .....

Court, was published in said newspaper in the issues of .....

October 24;

1997.

Affiant further says that said The Ledger is a newspaper published at Lakeland, in said Polk County, Florida, and that the said newspaper has heretofore been continuously published in said Polk County, Florida, daily, and has been entered as second class matter at the post office in Lakeland, in said Polk County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Signed .....

Nelson Kirkland  
Classified Advertising Manager  
By Nelson Kirkland who is  
personally known to me

24th

Sworn to and subscribed before me this .....

day of .....

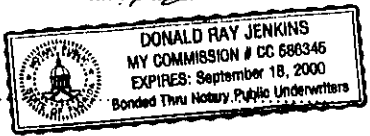
October .....

A.D. 19 .....

97.

(Seal)

Donald Ray Jenkins  
Notary Public



My Commission Expires .....

Order#674474  
S Wilkes

A860

### PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT AMENDMENT

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit Amendment No. 1050223-006-AC. (PSD-FL-190)  
Tiger Bay Power Plant  
Polk County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit amendment to Florida Power Corporation's requested changes in certain emission testing requirements at the Tiger Bay Power Plant located near Fort Meade, Polk County. The facility consists of a 258 megawatt gas and oil fired combustion turbine with a heat recovery steam generator and duct burner. A Best Available Control Technology (BACT) determination was not required pursuant to Rule 62-212.400, F.A.C. and 40 CFR 52.21. Prevention of Significant Deterioration (PSD). The amendment will not result in an increase in any emissions from the facility, and will not cause a violation of any state or federal ambient air quality standards or increments. The applicant's name and address are: Florida Power Corporation, 3201 34th Street South, St. Petersburg, FL 33733.

This amendment clarifies when annual testing for volatile organic compounds is required and that EPA Method 3A is an acceptable alternate for Method 3 for determining oxygen concentrations.

The Department will issue the FINAL Permit Amendment, in accordance with the conditions of the DRAFT Permit Amendment unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed DRAFT Permit Amendment issuance action for a period of 14 (fourteen) days from the date of publication of this Notice. Any written comments should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station 45535, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit Amendment, the Department shall issue a Revised DRAFT Permit Amendment and require, if applicable, another Public Notice.

The Department will issue FINAL Permit Amendment with the conditions of the DRAFT Permit Amendment unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. The procedures for petitioning for a hearing are set forth below. Mediation is not available for this action.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station 435, Tallahassee, Florida 32399-3000, telephone: 850/488-9370, fax: 850/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28.5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner; the applicant's name and address; the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) a statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice of intent. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection Bureau of Air Regulation 111 South Magnolia Drive, Suite 4 Tallahassee, Florida, 32301 Telephone: 850/488-1344 Fax: 850/922-6979	Department of Environmental Protection Southwest District Office Air Permitting Section 3804 Coconut Palm Drive Tampa, Florida 33619 Telephone (813) 744-6100 Fax: (813) 744-6084
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The complete project file includes the Draft Permit Amendment, the application, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-1344, for additional information.

A-860 - 10-24; 1997



October 30, 1997

Mr. Clair Fancy  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
2600 Blair Stone Rd.  
Tallahassee, FL 32399

**RECEIVED**

NOV 03 1997

BUREAU OF  
AIR REGULATION

RE: Tiger Bay Facility Power Plant Permit Amendment Request  
AC53-214903; PSD-FL-190

1050223-007-AC  
PSD-FL-190

Dear Mr. Fancy:

Florida Power Corporation (FPC) is applying for an amendment to the permit referenced above. The request is for an extension of the compliance due date from December 31, 1998 to December 31, 1999. A check in the amount of \$250 is enclosed for the processing of this amendment.

The construction permit referenced above requires that compliance with the NO<sub>x</sub> emission limit of 15 ppm be demonstrated by December 31, 1998. Progress has been made toward meeting this deadline; in fact, the most recent compliance test, which was performed earlier this month, indicated a NO<sub>x</sub> emissions level of 16 ppm. For the Tiger Bay facility, final compliance can be achieved through more advanced combustion technology or the use of selective catalytic reduction (SCR).

As Mr. Mike Kennedy of my staff recently discussed with you, General Electric (GE) is completing development of a new dry low-NO<sub>x</sub> combustor that can achieve the 15 ppm emission limit, which GE terms DLN 2.6. Initially, it appeared that the cost of retrofitting this system at the Tiger Bay facility would be significantly greater than that of SCR. As a result, FPC recently indicated to you that SCR would be installed by the December 31, 1998 date in order to achieve final compliance. However, since that time GE and FPC have agreed upon terms that will make the DLN 2.6 system cost-effective.

GE has indicated that the new combustion system can be installed by mid-1999, followed by a period of performance evaluation and compliance demonstration. Therefore, as FPC discussed with you a few weeks ago, FPC requests a 12-month extension to the compliance due date for Tiger Bay.

By installing advanced combustion technology rather than SCR, FPC will achieve compliance and avoid the negative issues associated with using SCR. These include transportation, storage, and handling of



Mr. Clair Fancy  
October 30, 1997  
Page Two

ammonia, ammonia "slip" through the SCR exiting the stack, disposal of spent catalyst, and the energy use by the SCR unit.

Thank you for your consideration of this request. Please contact Ms. Jennifer Tillman at (813) 866-5022 or Mr. Mike Kennedy at (813) 866-4344 if you have any questions.

Sincerely,



W. Jeffrey Pardue, C.E.P.  
Director

cc: Mr. Jerry Kissel, DEP - Tampa

cc: J. Heron  
EPA  
NPS  
SWD  
P&K Co.



ACCOUNTS PAYABLE DEPT. C2N

P. O. BOX 14042

ST. PETERSBURG, FL 33733-4042 REMITTANCE ADVICE

(813) 866-5257

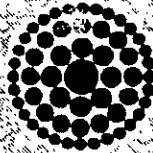
89

CHECK DATE 10/28/97 VENDOR DEPARTMENT OF ENVIRONMENTAL VENDOR NO. 184812 CHECK NO. 1928417

INVOICE NO.	DATE	OUR ORDER NO.	VOUCHER	GROSS AMOUNT	DISCOUNT	NET AMOUNT
DE1023250	10/23/97		9710150826	250.00	.00 TOTAL	250.00 250.00

THE ATTACHED REMITTANCE IS IN FULL SETTLEMENT OF ACCOUNT AS STATED. IF NOT CORRECT PLEASE RETURN TO ABOVE ADDRESS.

Accounts Payable Department C2N  
P.O. Box 14042  
St. Petersburg, FL 33733-4042



Florida Power CORPORATION

DATE 10/28/97 CHECK NO. 1928417

63-115  
631

PAY: \$250 DOLLARS AND 00 CENTS

\*\*\*\*\*250.00

SunTrust / Mid-Florida

TO  
THE  
ORDER  
OF

DEPARTMENT OF ENVIRONMENTAL  
PROTECTION-FINANCE & ACCTNG  
2600 BLAIR STONE RD  
TALLAHASSEE FL 32399

Void after 60 days

*J. V. Smallwood*  
Treasurer

⑈ 1001928417⑈ ⑆ 063101153⑆ 6990032052736⑈